

REMARKS

By this amendment, claims 2, 6, 8, 9, 12, and 13 are canceled, claims 1, 3, 4, and 7 are revised, and new claims 15-19 are added to place this application in condition for allowance. Currently, claims 1, 3-5, 7, 10, 11, and 14-19 are before the Examiner for consideration on their merits.

It should be noted that the claims are drafted to parallel the claims deemed to be patentable in the corresponding European application. For the Examiner's benefit, a copy of the claims pending in the European application are attached.

First, the revisions to claims 1 and 7 do not introduce new matter. In the amended claims 1 and 7, it has been made clear in the pre-characterizing part that the thickened homogenous solution is in the liquid state, the invention being characterized by the kerosene having a flashpoint greater than or equal to 62 °C and the polymer having a molecular weight in the range 1.4 to 2.0 x 10⁶. As to basis in the application as filed for these amendments, there is no verbatim basis to the term "liquid" but, nevertheless, the thickened kerosene is required to be used either as a lamp oil or as a barbecue fire lighting fluid suitable for absorption on charcoal. Both end uses require the kerosene to be in the form of a liquid; additionally, the density of the thickened kerosene given in the Example is quoted in gm/ml, ml being a liquid measure. It is therefore submitted that the requirement for the thickened kerosene to be a liquid is directly and unambiguously derivable from the application as filed.

As to the molecular weight range, this is to be found in claim 5 of the earlier claims.

With reference to the remainder of the claims, the dependent claims find support in earlier versions of the claims.

Turning now to the rejections based on the prior art, the Examiner has asserted that United States Patent No. 3,795,556 to Sippel et al. (D1) and the Ram et al. publication (D2) render the claims obvious under 35 U.S.C. § 103(a). Applicant asserts that a *prima facie* case of obviousness is not established based on the combination of references when considering the revisions to the claims.

D1 discloses several examples of fuels that may be combined with the polymer for thickening purposes. The specific fuel mentioned in D1 by way of example having a flashpoint of 140 °F, which is 60 °C, is different from but very close to the flashpoint lower limit as now claimed. The Examiner mistakenly asserts that a flashpoint of 140 °F is greater than or equal to 62 °C.

All fuels disclosed in D1 have low flashpoints, as they would need to have regard to the object of providing a self-igniting (pyrophoric) composition. In fact, all fuels disclosed in D1 have flashpoints lower than that of P-5, the military jet fuel having a flashpoint of 140 °F (60 °C). The limitation, in the present claims, to a kerosene having a flashpoint greater than or equal to 62 °C therefore distinguishes the present invention not only from the fuel disclosed by the way of example in D1, but also from the other fuels disclosed in D1.

As to the function and purpose of the respective inventions of D1 and the present application, it is emphasized that, in sharp contrast to D1 in seeking to provide a pyrophoric composition, the present invention must provide a composition which, while being combustible, absolutely must be safe to use, bearing in mind the intended use as a barbecue lighting fluid. It is actually not easy to light a liquid fuel, especially one having a higher flashpoint and, in the present invention, the reason for adding the thickening agent is to retard the burn time and hence to increase the reliability in lighting barbecues, especially where the barbecue fuel itself may be briquettes, recognized as being more difficult to ignite than lumpwood charcoal. It is also relevant that, where barbecue lighting fluids become spent before the barbecue fuel is properly ignited, there is a temptation to add further fluid with, potentially, dangerous consequences. Therefore, in terms of the object of the present invention, a high flashpoint fuel is desirable and retardation or extension of the burning time is important, since it is thus more likely that the charcoal fuel will become ignited without the need for addition of further fluid. The intended effect of the invention on the combustion characteristics of the fluid is referred to at the bottom of page 1 of the application as filed: "...providing enhanced burning time and burn rates."

To recap, D1 does not teach a liquid hydrocarbon fuel having the claimed flashpoint. Moreover, D1 teaches that, if anything, a flashpoint below 60 °C is desired such that one of skill in the art would not be led to formulate a kerosene with a flashpoint higher than 60 °C. This teaching away from specifying a higher

flashpoint than 60 °C means that the Examiner has no reason to assert that it would be obvious to utilize the claimed flashpoint in the teachings of D1.

D2 does not supply the deficiency in D1 in this regard. D2 is cited only to address the molecular weight aspect of the claims.

D2 is an academic paper reporting on the possibility of using high-shear viscometric data for polymer characterization. Five samples of polyisobutylene having molecular weights ranging from 1.1×10^6 to 6.6×10^6 dissolved respectively in toluene, kerosene, decalin, and gas oil were studied and viscosity data measured before and after exposure to high-shear conditions. Specifically, the various grades of polyisobutylene and molecular weights of 1.1, 1.64, 2.04, 5.6, and 6.6×10^6 (Table I); of these, only the second one (L-120) has a molecular weight falling within the range of claims 1 and 5. In all cases, the kerosene used was the technical grade with no further information except the viscosity at 30 °C. There is no indication given as to the flashpoint of technical kerosene but, since the normal range is from 38 to 72 °C, it is submitted that there is nothing in D2 which can be taken as an anticipation of the present claims. In other words, there is no disclosure of the method or the composition of independent claims 1 and 5 in the present application, concerning whether the kerosene in D2 has a flashpoint as required by the claims. Again, D2 cannot supply the deficiency in D1 in this regard and even if combined, a *prima facie* case of obviousness is not established.

Applicant also takes issue with the reliance on D2 to contend that the claimed molecular weight is present in the polyisobutylene of D1. D2 discloses a

number of molecular weights for polyisobutylene, only one of which falls within the claimed range. The Examiner improperly assumes that the one that falls within the claimed range is the one used by D1. There is no basis for this assumption. Inherency must occur each and every time when used in a rejection. In the instant case, the polyisobutylene of D1 could have any number of molecular weights so that it is reversible error for the Examiner to assume that the claimed one is present.

Moreover, and from the point of view of the skilled person seeking a solution to the problem of providing a barbecue lighting fluid with enhanced burning time and burn rate, one would not find any instruction or even hint in D2 that the solution as disclosed might, depending on the flashpoint requirement and molecular weight, achieve the intended result. The mere fact that D2 may disclose a molecular weight that is found in the claims does not lead to the conclusion that this weight can be automatically employed in D2. Applicant is not claiming to be the first to develop a polyisobutylene of a specified molecular weight. However, Applicant is the first to develop a method of thickening a liquid hydrocarbon using essentially paraffin polyolefin polymer in solid form by using a commercial kerosene of the defined flashpoint and molecular weight and the composition therefrom. The invention is not just the combination of any hydrocarbon and thickening polymer, but one as a commercial kerosene having a specific flashpoint and molecular weight. The specification of these variables is not arbitrary but for the purpose of providing a composition which, while being combustible, absolutely must be safe to use, bearing in mind the intended use as a barbecue lighting fluid. It is actually not

easy to light a liquid fuel, especially one having a higher flashpoint and, in the present invention, the reason for adding the thickening agent is to retard the burn time and hence to increase the reliability in lighting barbecues, especially where the barbecue fuel itself may be briquettes, recognized as being more difficult to ignite than lumpwood charcoal. D2 says nothing in this regard and there is no reason from D2 to specify the particular molecular weight found in claims 1 and 5. Any further assertion that it would be obvious to specify a particular molecular weight in D1 that meets the claim range is the blatant use of hindsight and such a rejection cannot be affirmed on appeal.

To summarize, the invention as now claimed is therefore submitted as being not only novel but also unobvious over the combination of D1 and D2. Put another way, D1 and D2 cannot establish a *prima facie* case of obviousness against claims 1 and 5. Since claims 1 and 5 are considered to be patentable over the applied prior art, their respective claims are also in condition for allowance.

Accordingly, the Examiner is requested to examine this application and pass all pending claims onto issuance.

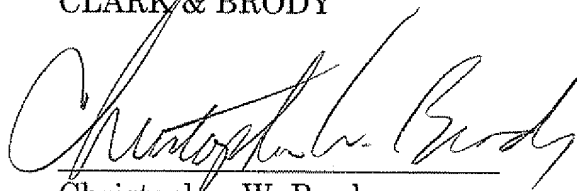
If the Examiner believes that an interview would be helpful in expediting the allowance of this application, the Examiner is requested to telephone the undersigned at 202-835-1753.

The above constitutes a complete response to all issues raised in the Office Action dated March 18, 2009.

Again, reconsideration and allowance of this application is respectfully requested.

Applicants respectfully submit that there is no fee required for this submission, however, please charge any fee deficiency or credit any overpayment to Deposit Account No. 50-1088.

Respectfully submitted,
CLARK & BRODY

A handwritten signature in cursive script, appearing to read "Christopher W. Brody", written over a horizontal line.

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